

ABSTRACT

5 The present invention provides a method and a
system for a real-time configurable definition and
generation of grating profile libraries. A parameter set is
used to specify the ranges of grating dimensions and
resolutions of the profile library to be generated. In one
10 embodiment, a compiler creates subsets of a large profile
library, the subset designed to enable rapid search and
validation of real-time data. In another embodiment, an
automatic process generates a new parameter set and a new
subset of the library when trigger conditions are met.
15 Subsets of the profile library may be used to check if
grating spectrum data are within the ranges established for
an application and if the dimensions are within the process
averages established for a manufacturing run. The system
for generation of grating profile libraries is scalable,
20 operable in a distributed environment, and includes
application specific items that can be selected or
determined by the client.